



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,514	12/20/2004	Gunter Doemens	4001-1192	8374
<small>466</small> YOUNG & THOMPSON 209 Madison Street Suite 500 ALEXANDRIA, VA 22314			<small>7590</small> EXAMINER PARK, EDWARD	
			<small>04/14/2009</small> ART UNIT 2624	PAPER NUMBER
			MAIL DATE 04/14/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/518,514

Applicant(s)

DOEMENS ET AL.

Examiner

EDWARD PARK

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

Response to Amendment

1. This action is responsive to applicant's amendment and remarks received on 1/21/09. Claims 16-35 are currently pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Hanna et al (US 6,714,665 B1) in view of Mahbub (US 6,961,443 B2).

Regarding **claims 16, 18, 20**, Hanna discloses a method for personal recognition, comprising: recording at the same time with a single optical sensor at least one subarea of a face and at least one subarea of a hand of a person to be identified, whereby the optical sensor records a surface picture of the face and the hand partially or completely and automatic personal identification by utilizing the picture for comparison with known data in an evaluating unit (see figure 6, numerals 610, 612, 614 which are sub-areas of the face and the hand of the individual which is recorded by a "imager"/optical sensor, see figure 3, numeral 10, col. 10, lines 8-31 and

is evaluated by figure 3, numeral 316, “stereo module” that locates portions of the image which include features such as skin tones or inter-image motion, see fig. 7, fig. 8, col. 16, lines. 66-67, col. 17, lines 1-11, regions 716 and 718 are classified as potential eye regions, see col. 20, lines 32-51, process 310 locates the iris using the focused NFOV image and then extract a high-quality image for use by the iris classification and comparison process in fig. 3, step 1420, recognizes the customer by comparing her scanned iris pattern to the patterns stored in the customer database 328). Hanna does not disclose using a single optical sensor and using optical triangulation to determine three-dimensional spatial coordinates, triangulation, and a laser scanner.

Mahbub teaches using a single optical sensor (see figure 4, numeral 36 camera is a single optical sensor) and using optical triangulation to determine three-dimensional spatial coordinates (see col. 4, lines 18-55 “3-D coordinated are measured using triangulation of the light spots”), triangulation (see col. 4, lines 18-55 “3-D coordinated are measured using triangulation of the light spots”), and a laser scanner (see figure 7, numeral 44, 48, col. 4, lines 57-67, col. 5, lines 1-7, “laser range finder” which determines 3-D coordinates).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna reference to utilize a single optical sensor with optical triangulation with a laser scanner as suggested by Mahbub, to decrease the cost and complexity of the overall system by decreasing the quantity of cameras needed to determine 3d coordinates by utilizing a single camera with a laser scanner (see col. 4, lines 1-67).

Regarding **claim 17**, Hanna discloses an imaging process (see figure 3 the system as a whole is an imaging process).

Regarding **claim 21**, Hanna discloses recording by the optical sensor (see figure 3, numeral 10 camera/imager is an optical sensor) additionally in two dimensions (see figure 3, numeral 10 camera captures an image in two dimensions).

Regarding **claim 22**, Hanna discloses recording repeatedly by the optical sensor in order to record a movement (see col. 10, lines 8-30 imager/camera provides images to the host processor at a rate of three to five images per second).

Regarding **claim 23**, Hanna discloses a device for personal recognition, comprising: a single optical sensor, adapted to record at the same time at least one subarea of a face and a hand of a person to be identified; an evaluating unit that works together with the optical sensor, wherein the optical sensor and the evaluating unit are able to record the face and the hand of the person, such that the optical sensor is configured to record a surface picture of the face or the hand partially or completely, and the evaluating unit is configured for automatic personal identification by utilizing the picture for comparison with known data in the evaluating unit (see figure 6, numerals 610, 612, 614 which are sub-areas of the face and the hand of the individual which is recorded by a "imager"/optical sensor, see figure 3, numeral 10, col. 10, lines 8-31 and is evaluated by figure 3, numeral 316, "stereo module" that locates portions of the image which include features such as skin tones or inter-image motion, see fig. 7, fig. 8, col. 16, lines. 66-67, col. 17, lines 1-11, regions 716 and 718 are classified as potential eye regions, see col. 20, lines 32-51, process 310 locates the iris using the focused NFOV image and then extract a high-quality image for use by the iris classification and comparison process in fig. 3, step 1420, recognizes the customer by comparing her scanned iris pattern to the patterns stored in the customer

database 328). Hanna **does not** disclose determining three-dimensional spatial coordinates by optical triangulation.

Mahbub, in the same field of endeavor, teaches determining three-dimensional spatial coordinates by optical triangulation ((see col. 4, lines 18-55 “3-D coordinated are measured using triangulation of the light spots”), triangulation (see col. 4, lines 18-55 “3-D coordinated are measured using triangulation of the light spots”), and a laser scanner (see figure 7, numeral 44, 48, col. 4, lines 57-67, col. 5, lines 1-7, “laser range finder” which determines 3-D coordinates)).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna reference to utilize a single optical sensor with optical triangulation with a laser scanner as suggested by Mahbub, to decrease the cost and complexity of the overall system by decreasing the quantity of cameras needed to determine 3d coordinates by utilizing a single camera with a laser scanner (see col. 4, lines 1-67).

Regarding **claim 24**, Hanna discloses recording both the at least one subarea of the face or the at least one subarea of the hand in an imaging process (see figure 3, numeral 10 which records the subareas of the face and hand of figure 6, numerals 612, 614).

Regarding **claims 25 and 26**, Hanna with Mahbub combination discloses all elements as mentioned above in claim 23. Hanna with Mahbub combination **does not** disclose recording the face or the hand partially or completely in three dimensions and triangulation as part of a light section method.

Mahbub teaches recording partially or completely in three dimensions and triangulation as part of a light section method (see col. 4, lines 18-55 “3-D coordinated are measured using triangulation of the light spots”).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna with Mahbub combination to utilize three dimensions and triangulation as suggested by Mahbub, to pre-process an image for multiple biometric feature recognition and to decrease the cost and complexity of the overall system by decreasing the quantity of cameras needed to determine 3d coordinates by utilizing a single camera with triangulation.

Regarding **claim 27**, Hanna discloses implementing an imaging method (see figure 3 the system as a whole is an imaging method).

Regarding **claim 28**, Hanna discloses partially or completely recording a movement by repeatedly recording the face or the hand (see col. 10, lines 8-30 imager/camera provides images of figure 6 to the host processor at a rate of three to five images per second).

Regarding **claim 29**, Hanna discloses recording by the optical sensor (see figure 3, numeral 10 camera/imager is an optical sensor) additionally in two dimensions (see figure 3, numeral 10 camera captures an image in two dimensions).

Regarding **claim 30**, Hanna discloses recording by the optical sensor (see figure 3, numeral 10 camera/imager is an optical sensor) additionally in two dimensions (see figure 3, numeral 10 camera captures an image in two dimensions).

Regarding **claim 32**, Hanna discloses recording by the optical sensor (see figure 3, numeral 10 camera/imager is an optical sensor) additionally in two dimensions (see figure 3, numeral 10 camera captures an image in two dimensions).

Regarding **claim 33**, Hanna discloses recording repeatedly by the optical sensor in order to record a movement (see col. 10, lines 8-30 imager/camera provides images to the host processor at a rate of three to five images per second).

Regarding **claim 34**, Hanna discloses recording repeatedly by the optical sensor in order to record a movement (see col. 10, lines 8-30 imager/camera provides images to the host processor at a rate of three to five images per second).

4. **Claims 19, 31, 35** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Hanna et al (US 6,714,665 B1) with Mahbub (US 6,961,443 B2) as applied to claim 18 above, and further in view of Ban et al. (US 6,775,403 B1).

Regarding **claim 19**, Hanna with Mahbub combination discloses all elements as mentioned above in claim 18. Hanna with Mahbub combination does not disclose utilizing a light –section method.

Ban teaches utilizing a light-section method (Ban: col. 4, lines 31-39).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the Hanna with Mahbub combination to utilize a light-section method as suggested by Ban, to “[convert] shape information into 3-D range image data (so-called 3-D image data)” in a non-contact measuring method, which is considered well known in the art.

Regarding **claim 31**, Hanna discloses recording by the optical sensor (see figure 3, numeral 10 camera/imager is an optical sensor) additionally in two dimensions (see figure 3, numeral 10 camera captures an image in two dimensions).

Regarding **claim 35**, Hanna discloses recording repeatedly by the optical sensor in order to record a movement (see col. 10, lines 8-30 imager/camera provides images to the host processor at a rate of three to five images per second).

Response to Arguments

5. Applicant's arguments filed on 1/21/09, in regards to claims 16, 23 have been fully considered but they are not persuasive. Applicant argues that Mahbub does not disclose simultaneous utilization of face and hand parts of the person to be identified (see pg. 9, second paragraph). This argument is not considered persuasive since Hanna is utilized to disclose the automatic personal identification by utilizing the picture for comparison with known data in an evaluating unit as seen above in the rejection of claim 16. Furthermore, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., simultaneous utilization of face and hand parts of the person to be identified) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that Hanna and Mahbub have fundamentally different objectives and combination of technologies and neither teach utilization of an evaluating unit configured for automatic personal identification by utilizing the picture for comparison with known data in the evaluating unit (see pg. 11, last paragraph – pg. 12, first paragraph). In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re*

Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Examiner notes that the cited limitation is taught by the Hanna reference as seen above in the rejection of claims 16, 23.

Applicant argues that the Ban reference belongs to a fundamentally different art from that of the present invention and Ban fails to disclose the utilization of an evaluating unit configured for automatic personal identification by utilizing the picture for comparison with known data in the evaluating unit (see pg. 12, second paragraph). In response to applicant's argument that Ban is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Ban is utilized to teach a particular problem pertinent to the combination of Hanna with Mahbub combination in order to "[convert] shape information into 3-D range image data (so-called 3-D image data)" in a non-contact measuring method, which is considered well known in the art.

Regarding claims depending from claims 16, 23, applicant argues that the claims are patentable due to the dependency from claims 16, 23, respectively (see pg. 14, first paragraph). This argument is not considered persuasive since claims 16, 23 stand rejected and the arguments and rejection can be seen above.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDWARD PARK whose telephone number is (571)270-1576. The examiner can normally be reached on M-F 10:30 - 20:00, (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samir Ahmed can be reached on (571) 272-7413. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Edward Park
Examiner
Art Unit 2624

/Edward Park/
Examiner, Art Unit 2624

/Samir A. Ahmed/
Supervisory Patent Examiner, Art Unit 2624